



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Agency for Toxic Substances
and Disease Registry
Atlanta GA 30333



October 31, 1995

Jennifer Wendell
Waste Management Division
United States Environmental
Protection Agency
77 W. Jackson Blvd. (HSR-6J)
Chicago, Illinois 60604

Dear Jennifer:

Here is a copy of the Site Review and Update (SRU) for the
following site:

Nutting Truck & Caster Company

The primary purpose of this document is to perform a review of
current site conditions and recommend further actions for ATSDR
to take at the site. If an extensive evaluation is necessary due
to new information the SRU will recommend that a health
consultation or a public health assessment be performed. A
written response is necessary only if significant errors are
noted which could change the conclusions and recommendations made
in the document.

If you have any questions regarding this document, please contact
me at 886-0840.

Sincerely,

Louise A. Fabinski
Louise Fabinski
Senior Regional Representative

Site Review and Update

NUTTING TRUCK AND CASTER COMPANY

FARIBAULT, RICE COUNTY, MINNESOTA

CERCLIS NO. MND006154017

OCTOBER 24, 1995

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Agency for Toxic Substances and Disease Registry

Division of Health Assessment and Consultation

Atlanta, Georgia 30333

Site Review and Update: A Note of Explanation

The purpose of the Site Review and Update is to discuss the current status of a hazardous waste site and to identify future ATSDR activities planned for the site. The SRU is generally reserved to update activities for those sites for which public health assessments have been previously prepared (it is not intended to be an addendum to a public health assessment). The SRU, in conjunction with the ATSDR Site Ranking Scheme, will be used to determine relative priorities for future ATSDR public health actions.

SITE REVIEW AND UPDATE

NUTTING TRUCK AND CASTER COMPANY
FARIBAULT, RICE COUNTY, MINNESOTA
CERCLIS NO. MND006154017

Prepared By:

The Minnesota Department of Health
in Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

FORWARD

This document summarizes potential public health concerns at a hazardous waste site in Minnesota. It is based on a formal site evaluation prepared by the Minnesota Department of Health (MDH). A number of steps are necessary to do such an evaluation:

- **Evaluating exposure:** MDH scientists begin by reviewing available information about environmental conditions at the site. The first task is to find out how much contamination is present, where it's found on the site, and how people might be exposed to it. Usually, MDH does not collect its own environmental sampling data. We rely on information provided by the Minnesota Pollution Control Agency (MPCA), U.S. Environmental Protection Agency (EPA), and other government agencies, businesses, and the general public.
- **Evaluating health effects:** If there is evidence that people are being exposed—or could be exposed—to hazardous substances, MDH scientists will take steps to determine whether that exposure could be harmful to human health. The report focuses on public health—the health impact on the community as a whole—and is based on existing scientific information.
- **Developing recommendations:** In the evaluation report, MDH outlines its conclusions regarding any potential health threat posed by a site, and offers recommendations for reducing or eliminating human exposure to contaminants. The role of MDH in dealing with hazardous waste sites is primarily advisory. For that reason, the evaluation report will typically recommend actions to be taken by other agencies—including EPA and MPCA. However, if there is an immediate health threat, MDH will issue a public health advisory warning people of the danger, and will work to resolve the problem.
- **Soliciting community input:** The evaluation process is interactive. MDH starts by soliciting and evaluating information from various government agencies, the organizations responsible for cleaning up the site, and the community surrounding the site. Any conclusions about the site are shared with the groups and organizations that provided the information. Once an evaluation report has been prepared, MDH seeks feedback from the public. *If you have questions or comments about this report, we encourage you to contact us.*

Please write to: Community Relations Coordinator
Site Assessment and Consultation Unit
Minnesota Department of Health
121 East Seventh Place/Suite 220
Box 64975
St. Paul, MN 55164-0975

OR call us at: (612) 215-0916 or 1-800-657-3904
(toll free call—press "4" on your touch tone phone)

INTRODUCTION

The Minnesota Department of Health (MDH) prepared a Public Health Assessment (PHA) for the Agency for Toxic Substances and Disease Registry (ATSDR) for the Nutting Truck and Caster Company site (Site). It was released in June, 1989. This Site Review and Update (SRU) document will briefly review information contained in that health assessment and other relevant documents, and provide an update of current Site conditions.

The Site is on both the Federal National Priorities List (NPL) and the State Permanent List of Priorities (PLP). The information in this SRU was obtained from a review of MDH and Minnesota Pollution Control Agency (MPCA) files, discussions with individuals associated with the Site, and a Site visit.

SUMMARY OF BACKGROUND AND HISTORY

Site Description and History

The Site is in Faribault, Minnesota, a city containing 18,028 residents (1992 estimate) located about 50 miles south of the Twin Cities' metropolitan area. The groundwater underneath the Site is contaminated as a result of disposal activities and subsequent leaching of Site materials. The region around the Site is a mixture of retail, light manufacturing, and residential zones. A general map of the Site and surrounding area is given in Figure 1 at the end of this report; a more detailed map of the Site is given in Figure 2.

The Site operated continuously from 1891 to 1984. Nutting manufactured and distributed casters, wheels, hand trucks, and towline trucks during that time. An abandoned gravel pit, located on the Site, was used for disposal of foundry wastes, sand, gravel, and hazardous wastes. The northwest corner of the gravel pit was the last area to be filled and has come to be known as the "disposal pit" (Barr, 1986). Nutting has subsequently moved its operations to South Dakota and is now known as Prairie Avenue Leasing, Ltd.

Environmental Investigations

A study conducted by PACE Laboratories in 1979 concluded that 1) the sludge in the disposal pit contained significant amounts of methylene chloride and trichloroethylene (TCE); 2) the groundwater below the disposal pit was contaminated with metals and organic solvents; and 3) the direction of groundwater flow was generally to the north (later studies further define the flow as northeast). The disposal pit was excavated in 1980, filled in, and paved over.

A Remedial Investigation/Feasibility Study (RI/FS) was conducted by Nutting and their contractor (Barr Engineering) between 1984 and 1986 in order to characterize any remaining contamination. This provided the data necessary for the development of a Remedial Action Plan (RAP) in 1987. The RAP presented the details for a groundwater pump-out system that would intercept and mitigate the identified contaminant plume as it left the Nutting property. Specifically, the RAP required Nutting to: 1) pump out contaminated groundwater until a concentration of 50 micrograms per liter ($\mu\text{g/L}$) TCE is consistently achieved in the alluvium at the Nutting property boundary; and 2) monitor groundwater to assess the effectiveness of the pump-out system. The system was installed in late 1987

and has been operating since.

The 1989 Public Health Assessment by ATSDR concluded that no municipal or private wells were ever affected by the TCE contamination, no human exposure pathways were complete, and the site was of limited public health concern.

Since wastes have been left on the Site, a "Five Year Review" was conducted according to EPA guidelines in 1994. This review is intended to ensure that the remedies implemented continue to be protective of public health and the environment. Briefly, the Five Year Review concludes that the levels of TCE in groundwater are consistently below the site-specific clean-up standard of 50 $\mu\text{g/L}$ but remain above the Maximum Contaminant Level (MCL) of 5 $\mu\text{g/L}$, that the MCL of 5 $\mu\text{g/L}$ may not be attainable with the current system, and that additional technologies should be explored for potential use. It also concludes that as long as the system continues to operate, the contaminants in the upper aquifers under the Site will be prevented from further migration. The Minnesota Health Risk Limit (HRL) for TCE in private drinking water sources is 30 $\mu\text{g/L}$.

Community Concerns

Due to the low profile of the groundwater pumpout system and the completion of surface excavation activities, community involvement in the Site has been minimal over the recent past. However, as uncertainties regarding contamination in the nearby municipal well become public, community awareness and concerns are likely to escalate considerably.

A series of meetings were held with representatives from the MPCA and the City of Faribault to discuss issues related to the Site and recommend a course of action to resolve uncertainties. The main item of discussion was the possibility of an additional source for the TCE found in the municipal drinking water system. These meetings were generally very productive and increased communication and understanding between the parties involved. They also helped define a list of what data were needed to address both community concerns and information gaps.

CURRENT SITE CONDITIONS

Site Visit

On December 16, 1994, Daniel Symonik and Richard Soule of MDH visited the Site. Briefly, the following were observed:

- The area which was excavated (to remove the disposal pit) is now a paved, fenced, and gated parking lot for the adjacent businesses. Other than the wellheads, there was no obvious signs of contamination remaining in the area (such as mounds of soil or debris), although the snow cover greatly limited the amount of soil which was visible.
- The monitoring wells appear to be undamaged and in good working order. The air stripping/cascade treatment system was operational. Contaminated groundwater is pumped from two adjacent wells and allowed to flow over a airstep (located in an enclosed concrete vault below the ground level) and then into a large conduit for discharge. A small pool has formed at the discharge point, but is unlikely to be used for fishing or swimming due to the nearby traffic and noise.

- There are older homes located directly south and west of the Site. They typically are one or two story homes with detached garages and multiple storage sheds. The ages of the homes indicate that at one time they likely had private wells (they are currently all reportedly on municipal water). The snow in the yards appeared to be well trampled, indicating the presence of children in the area.

Groundwater

There are four aquifers beneath the Site. The uppermost layer is composed of intermixed sand and silty sand that was deposited during the last glacial period. Below this is the St. Peter sandstone aquifer, which is composed of a fine to medium grained sandstone. Near the base of the St. Peter sandstone there is often a clayey zone that, when present, can impede but not prevent vertical movement of groundwater. Below the St. Peter are the Prairie du Chien dolomite (limestone) and the Jordan sandstone, which together are the important regional aquifer. There is significant karst (cave-like openings) in the Prairie du Chien dolomite. These openings tend to concentrate groundwater flow into narrow openings that can be both vertically and horizontally extensive. As a result, most of the groundwater flow is concentrated in narrow openings of unknown location which results in unpredictable flow rates and directions.

Traditional groundwater investigation techniques have shown that the glacial sand and the St. Peter Sandstone aquifers in the Site vicinity have been contaminated by TCE. The local monitoring well network shows a clear pattern of concentrations of 100's of $\mu\text{g/L}$ in the site vicinity to less than 1 $\mu\text{g/L}$ approximately 0.25 miles downgradient from the site. This portion of the contamination plume has been addressed using a pump-out system. There has been a significant drop in TCE concentrations over the life of the pump-out system. Initial concentrations of TCE were found as high as 570 $\mu\text{g/L}$. The EPA 5-year review states that while "hydraulic containment of the groundwater plume is being accomplished; contaminant levels are approaching asymptotic conditions in extraction well PW-17 (20 to 30 $\mu\text{g/L}$ TCE) and extraction well PW-18 (10 to 15 $\mu\text{g/L}$ TCE)." This places the average TCE concentration at the Site below the clean-up standard established in the ROD of 50 $\mu\text{g/L}$ but above the current MCL of 5 $\mu\text{g/L}$. EPA also recommends further monitoring of the groundwater, even though it appears that the target of 5 $\mu\text{g/L}$ may not be permanently attained, and that "available technologies such as in-situ bioremediation, air sparging, or vacuum extraction should be explored."

Contamination patterns in the Prairie du Chien aquifer (which is below the St. Peter aquifer) are less clear. There are three monitoring wells open to the Prairie du Chien formation near the site. The only well that has consistently detected TCE is located adjacent to the Nutting property. It has relatively low levels (average of about 13 $\mu\text{g/L}$ TCE). The remaining Prairie du Chien wells are generally downgradient from the site although they are about 500 feet apart and more than 1000 feet from the disposal pit. Unlike the upper aquifers, the contamination levels in the Prairie du Chien at the site do not appear to be decreasing but have remained relatively constant. It has been suggested that the contamination found in the impacted Prairie du Chien monitoring well is leakage from the upper aquifer resulting from the placement of the well. Although this is a possibility, it seems unlikely given that vertical gradients in the site area suggest that flow would be from the Prairie du Chien aquifer *upward* into the more contaminated St. Peter and glacial aquifers. In addition, due to the complex geology, it is nearly impossible to know whether wells are correctly placed in flow or fractures that lead downgradient.

Groundwater in the area of the Site generally flows in a north to northeasterly direction. The City of Faribault has five municipal wells located about 0.5 miles directly downgradient from the Site. These wells pump water from the Prairie du Chien/Jordan aquifer. In 1982, all five were found to contain TCE. A graph of the concentrations of TCE in the city wells (ellipses), in the city distribution system (rectangles) and in the pumpout wells (triangles) are shown on Figure 3. The health based HRL, the maximum allowable level and applicable to private water supplies in Minnesota, and the MCL, the maximum allowable federal limit applied to public water supplies, are also shown on Figure 3. As can be seen from the Figure, most of the TCE measurements from the municipal wells have been above the MCL but below the HRL. In general, the TCE concentrations in the distribution system have been maintained below the MCL through losses during treatment and by relying on less contaminated wells. The graph also shows that the overall quality of the city well water appears to have improved since the Nutting pump-out system began operation in late 1987. However, this relationship may only be circumstantial.

Five wells were recently tested to gather additional information regarding the fate and flow of TCE in the general area of the site. The following table summarizes results from these wells:

<u>Well Location</u>	June 1995	August 1995
MW-1 (west of municipal well #4)	10 µg/L	1.2 µg/L
MW-2 (on Lincoln School property)	30 µg/L	< 1.0 µg/L
Faribault municipal well #1	3 µg/L	Not Sampled
Faribault municipal well #3	8 µg/L	Not Sampled
Faribault municipal well #4	8 µg/L	Not Sampled

These data suggest that there may be an area of groundwater contamination that exceeds both the MCL and the health based HRL. The groundwater elevations in the monitoring wells that were measured in June indicate radial flow toward the municipal wells in the area where TCE was detected. The August samples were collected at a time when the major municipal wells were not operating due to maintenance. These samples appear to confirm the source for the TCE detected in June is likely southwest of the municipal well field and is not the Nutting site. This possibility is supported by the previous detection of TCE in shallow groundwater near a potential source area southwest of the municipal well field. The samples also show that the municipal wells strongly affect the movement of TCE in groundwater in the area.

Soil

With the excavation of the disposal pit in 1980, all known areas of surface contamination were removed. While there may be some areas of capillary contamination associated with the remaining contaminated groundwater, this area is expected to be well below the surface and should not constitute a complete exposure pathway. Therefore no current health threats exist from the soil pathway.

Air

Since all of the remaining contamination is below the surface, and the disposal pit area has been covered with a concrete pad, there currently is no significant release to the air pathway. In addition, contaminants released from the aeration treatment system are anticipated to be well below levels of health concern. Therefore no current health threats exist from the air pathway.

Surface Water

Surface water bodies in the region are limited to wetland areas, small lakes occupying undrained kettlehole depressions, the Cannon River (located about one mile north of the Site), and the Straight River (located about one mile east of the Site). Treated water from the pump-out system is discharged via a storm sewer to Crocker's Creek about 3 blocks west of the Site, where it then flows northward to the Cannon River. Although the Creek is open to the public, concentrations are within limits established in the NPDES discharge permit and do not pose a risk to public health.

Exposure Pathways of Concern

The ongoing low level TCE contamination of the Faribault municipal water supply represents a completed exposure pathway, regardless of the specific source of the TCE. At very high doses (e.g. hundreds of times above what is found at the Site), TCE may cause dizziness, headaches, nerve damage, liver and kidney damage. Although animal studies have shown that high doses of TCE can cause tumors in rats and mice, it is uncertain whether people who are exposed to lower doses of TCE have a higher risk of cancer. The cancer classification is currently being reviewed by EPA (TCE formerly was listed as a B2 "probable human" carcinogen). The Minnesota HRL for drinking water assumes cancer to be the endpoint of concern. Therefore, low levels of TCE in drinking water may pose a carcinogenic threat to long-term users. Based on the site conditions described above, the current complete exposure pathways are:

- Ingestion of TCE contaminated groundwater from the municipal water supply or from nearby private wells completed in the contaminated aquifer.
- Inhalation of volatilized contaminants released from, and dermal contact with, contaminated groundwater from the municipal water supply or from nearby private wells completed in the contaminated aquifer.

In addition, the following potential exposure pathways may become complete in the future:

- Ingestion of contaminated groundwater from any new wells (or the use of old wells) pumping from the contaminant plume associated with the site.
- Inhalation of volatilized contaminants released from, and dermal contact with, contaminated groundwater by any users of contaminated wells.

Although groundwater may constitute a complete exposure pathway for this site, there is uncertainty regarding the potential health threat posed. This uncertainty is a result of differences in groundwater standards for TCE (MCL = 5 µg/L; MN HRL = 30 µg/L; ROD-established value = 50 µg/L) and observed concentrations at the Site which are in a similar range. Since the concentration of TCE

municipal wells #3 and #4 is above the MCL, the federal interpretation indicates that water from these wells would not be suitable as a long-term drinking water source. However, because water from those wells is blended with water from other wells in the system, the final concentration of TCE in the overall municipal system remains just below the MCL.

CURRENT ISSUES

Faribault plans to install a new municipal well in the near future. The water quality provided by this well may be affected by its location and its screened depth interval. Current plans call for this well to be located on the north side of the Cannon River in the vicinity of municipal well #5. Although this well appears to have been the least impacted by TCE contamination, the MCL of 5 µg/L has been exceeded three times (33, 7.8 and 15 µg/L) since 1982.

Faribault plans to complete a wellhead protection plan in 1996. This plan will include groundwater modeling to determine the capture zones of the municipal well field and recommendations on land use activities to ensure protection of the municipal water supply.

All scheduled remedial activities have been completed on the Site. Operation and maintenance activities are ongoing and will continue into the future. These involve the biannual sampling of ten wells, the catch basin, and the outfall area at the discharge to Crocker's Creek. The groundwater samples are analyzed for TCE, 1,1- and 1,2-dichloroethylene. Samples from the catch basin are also analyzed for Oil and Grease, pH, and total organic carbon.

Well PW-17 has had the drop-pipe replaced 2 times since the system was installed. A galvanic reaction is suspected to be the cause of the premature corrosion. Therefore additional attention is needed to help maintain the integrity of this well.

CONCLUSIONS

- 1) The groundwater underneath and downgradient from the Site is contaminated as a result of disposal activities and subsequent leaching of Site materials. TCE has been detected in all three aquifers (glacial drift, St. Peter, and Prairie du Chien/Jordan) that are monitored at the site.
- 2) A groundwater pump-out system has been installed to intercept and mitigate the identified contaminant plume in the glacial drift and St. Peter aquifers as it leaves the Nutting property. The levels of TCE in groundwater currently are consistently below the clean-up standard of 50 µg/L but remain above the MCL of 5 µg/L. However, the MCL of 5 µg/L may not be attainable with the current system.
- 3) Groundwater flow patterns in the Prairie du Chien aquifer are complicated by the dominance of channelized flow in karstic, cave-like openings. Most of the groundwater flow in this aquifer is concentrated in narrow fractures of unknown location which may result in unpredictable flow rates and directions.
- 4) The Faribault municipal well field is located down gradient from the Site and other potential but undocumented sources. The well field water quality has historically been impacted by TCE above the MCL but has improved significantly since the onset of

the Site pump-out system in 1987. Currently, the TCE in the overall municipal system remains quantifiable, just below the MCL.

- 5) Although uncertainty remains, the best available evidence indicates that there may be an unknown source of TCE impacting the Faribault municipal water supply well. Groundwater quality information from the newly installed MPCA Prairie du Chien monitoring wells shows that there TCE concentrations in the area are up to 30 $\mu\text{g/L}$.
- 6) Due to differences in groundwater standards for TCE (MCL = 5 $\mu\text{g/L}$; MN HRL = 30 $\mu\text{g/L}$; ROD-established value = 50 $\mu\text{g/L}$) and observed concentrations which are in a similar range, there is uncertainty regarding the degree of the health threat posed by groundwater at the Site.

RECOMMENDATIONS

The following activities are recommended:

- 1) Additional hydrologic investigations should be conducted to determine the significance of the groundwater quality information provided by the new MPCA monitoring wells. These investigations should determine the source of the TCE southwest of the main well fields and the locations of any private wells that may be adversely impacted by a groundwater contamination plume.
- 2) The MDH should facilitate the rapid completion of the wellhead protection plan for Faribault. If possible, the city should delay plans for the construction of the new municipal well until after this plan is complete to provide better assurance of the future water quality from this well.
- 3) Periodic monitoring of groundwater should continue to ensure that 1) the contaminant plume does not expand in an unexpected manner; and 2) that no future exposure occurs.
- 4) The prohibition against installation of new wells in the drift aquifer should be continued. This will help ensure that no new exposure pathways are created in the future.
- 5) Pertinent information should be distributed to residents of the surrounding area regarding Site activities and future plans. It is important that the citizens be informed of potential risks in their communities so they may take appropriate actions to avoid creating complete exposure pathways in the future.

DOCUMENTS REVIEWED

Documents reviewed by MDH for the preparation of this SRU:

1. MPCA, *Superfund Permanent List of Priorities*, June 1994.
2. ATSDR, *Health Assessment for Nutting Truck and Caster Company*, June 27, 1989.
3. Barr Engineering Co., *Remedial Investigation, The Nutting Company*, August 11, 1986.
4. MPCA, *Superfund Preliminary Site Close-Out Report*, September, 1992.
5. USEPA, *Five Year Review Report, Nutting Truck and Caster Site*, March 29, 1994.
6. letter from Marta Harding-Smith of Barr Engineering to PCA Hydrologist Barb Gnabasik, July 14, 1994.
7. letter from Marta Harding-Smith to PCA Project Manager Ann Bidwell, June 15, 1994.
8. Barr Engineering Company, *Response Action Plan, The Nutting Company Faribault Site*, December, 1986.
9. MPCA, *Response Order By Consent Approval*, September, 1987.
10. Memo from Eric Porcher, MPCA to Maureen Johnson, MPCA. *Faribault Wellfield project lab results*. June 16, 1995.
11. MDH. *Table of Health Risk Limits and Toxicologic Endpoints*. December, 1994.
12. ATSDR. *Toxicological Profile for Trichloroethylene. Update*. April, 1993.

Preparers of this report:

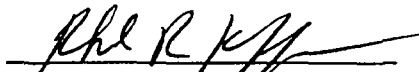
Daniel M. Symonik
Toxicologist

Richard Soule
Hydrogeologist

Minnesota Department of Health
Section of Environmental Health Hazard Management

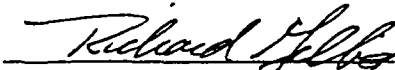
CERTIFICATION

This Nutting Truck and Caster Company Site Site Review And Update was prepared by the Minnesota Department of Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the site review & update was begun.



Richard R. Kauffman, M.S.
Technical Project Officer
State Programs Section (SPS)
Superfund Site Assessment Branch (SSAB)
Division of Health Assessment and Consultation (DHAC)
ATSDR

The Division of Health Assessment and Consultation, ATSDR, has reviewed this site review & update, and concurs with its findings.



Richard E. Gillig, M.C.P.
Chief, SPS, SSAB, DHAC, ATSDR

Air Data of Sunland Park Community, Doña Ana County, NM

Contaminant	Maximum Value (ug/m3)	Comparison Value	Year/ Quarter	Maximum Arithmetic mean ug/m3 CompValue		Year/Qtr.	Comparison Value (ug/m3)
PM-10	309 491*		1995/1st 1994/1st	38	50	1990/1st	150***
Lead	0.65		1990	0.17	1.5^^	1990/3rd	
Ozone	71.40**	236**	1993	275**		1993	
Sulfur Dioxide	308***	367*** 262***#	1990	47.16	79	1990	
	1164@	131@^	1991	41.92	52#	1991	

*The Air Quality board has requested the EPA value be flagged as unusual event, non-anthropogenic exceedance of the standard, occurring on high-wind days.

**=1 hour

***=24 hours

@=3 hours

New Mexico Standard. New Mexico Ambient Air Quality Standards are set forth by Air Quality Control Regulation.

^= Federal Secondary Standard. National Secondary standards define levels of air quality which the administrator (EPA) judges necessary to protect human health and welfare from any known or anticipated adverse effects of a pollutant. The Federal Standards for Ambient Air Quality, both primary and secondary can be found in the "National Ambient Air Quality Standards" (NAAQS) as established by the Environmental Protection Agency (EPA).

^^= Calendar quarter arithmetic average

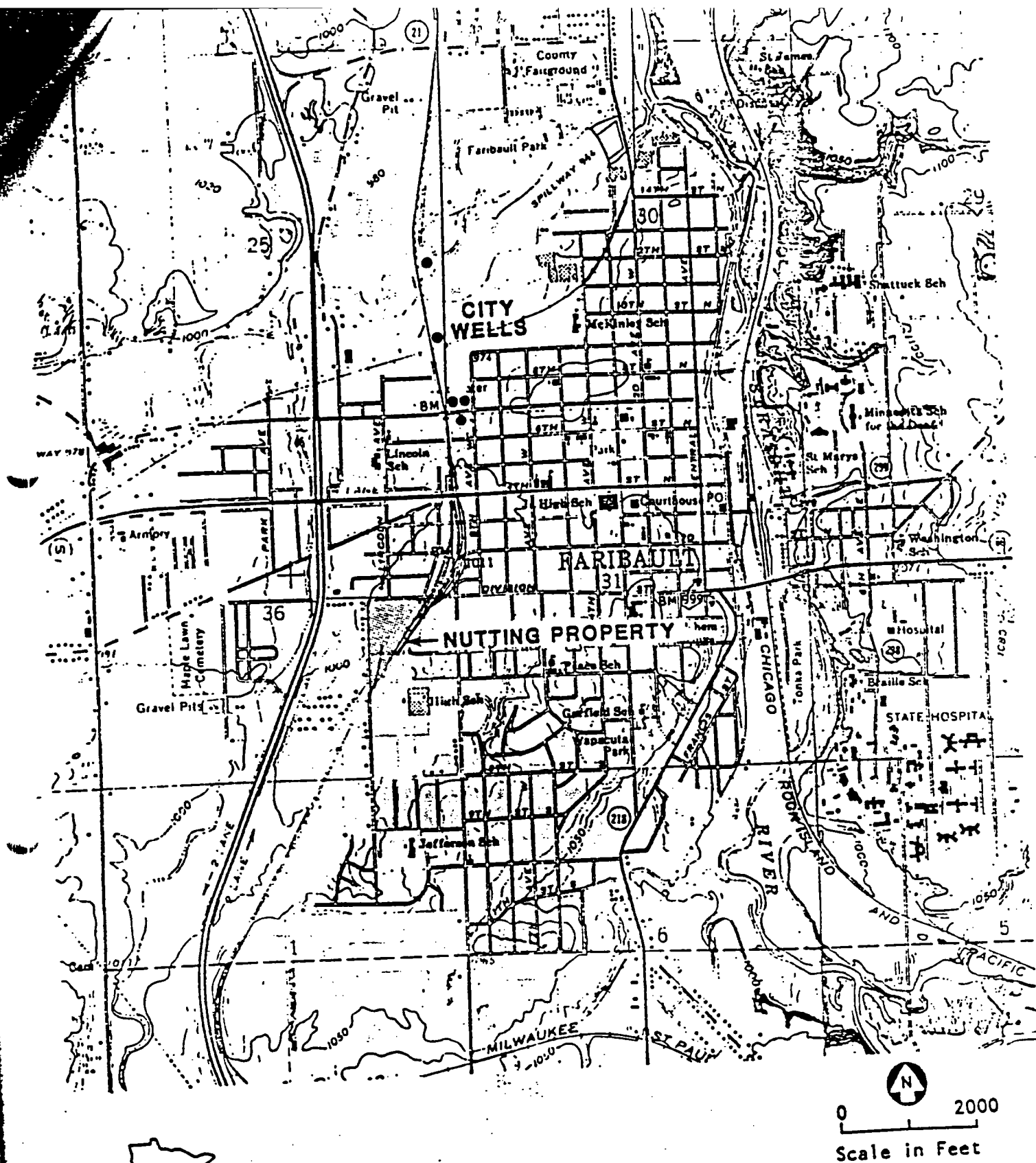


Figure 1
 LOCATION MAP
 The Nutting Company
 Faribault, Minnesota

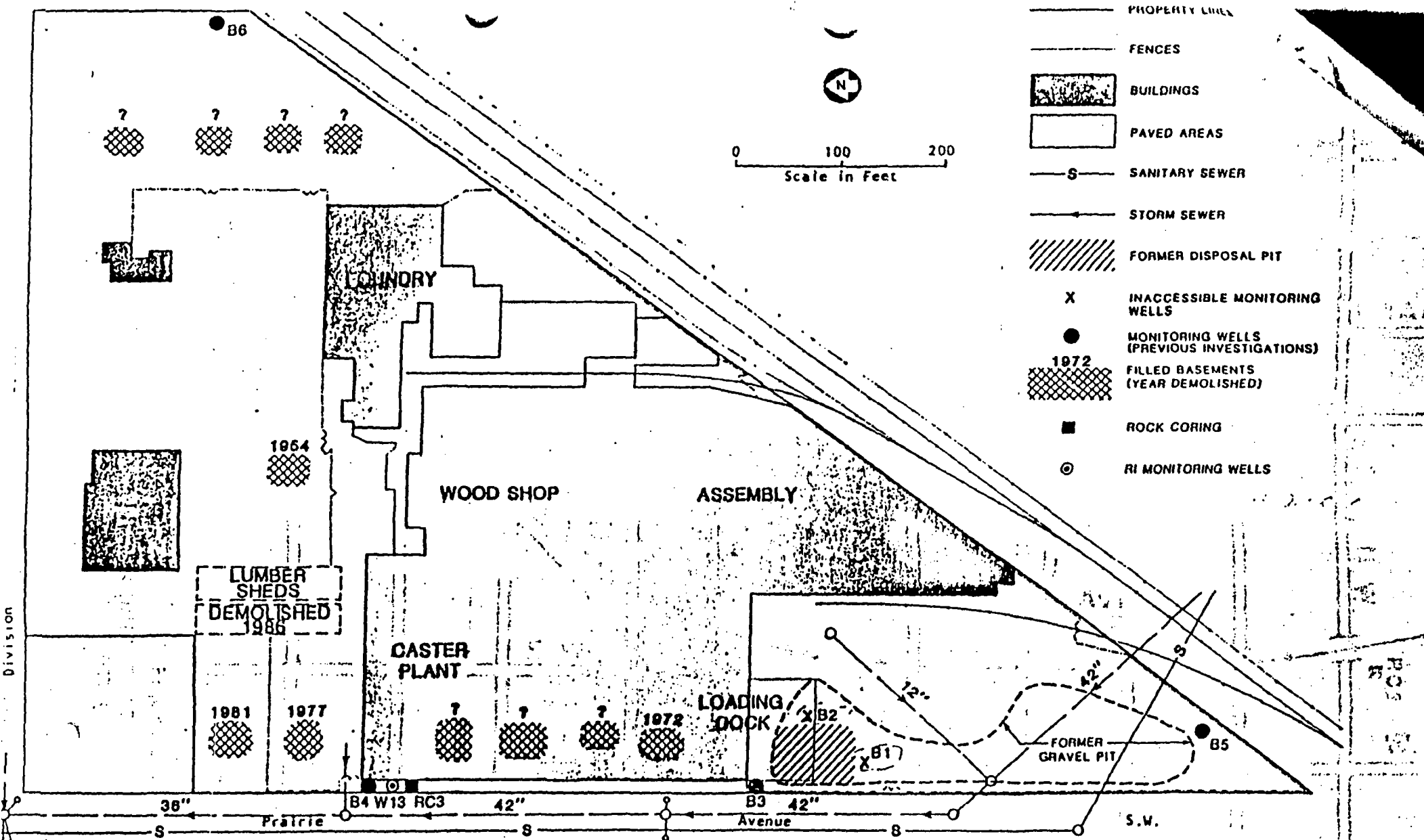


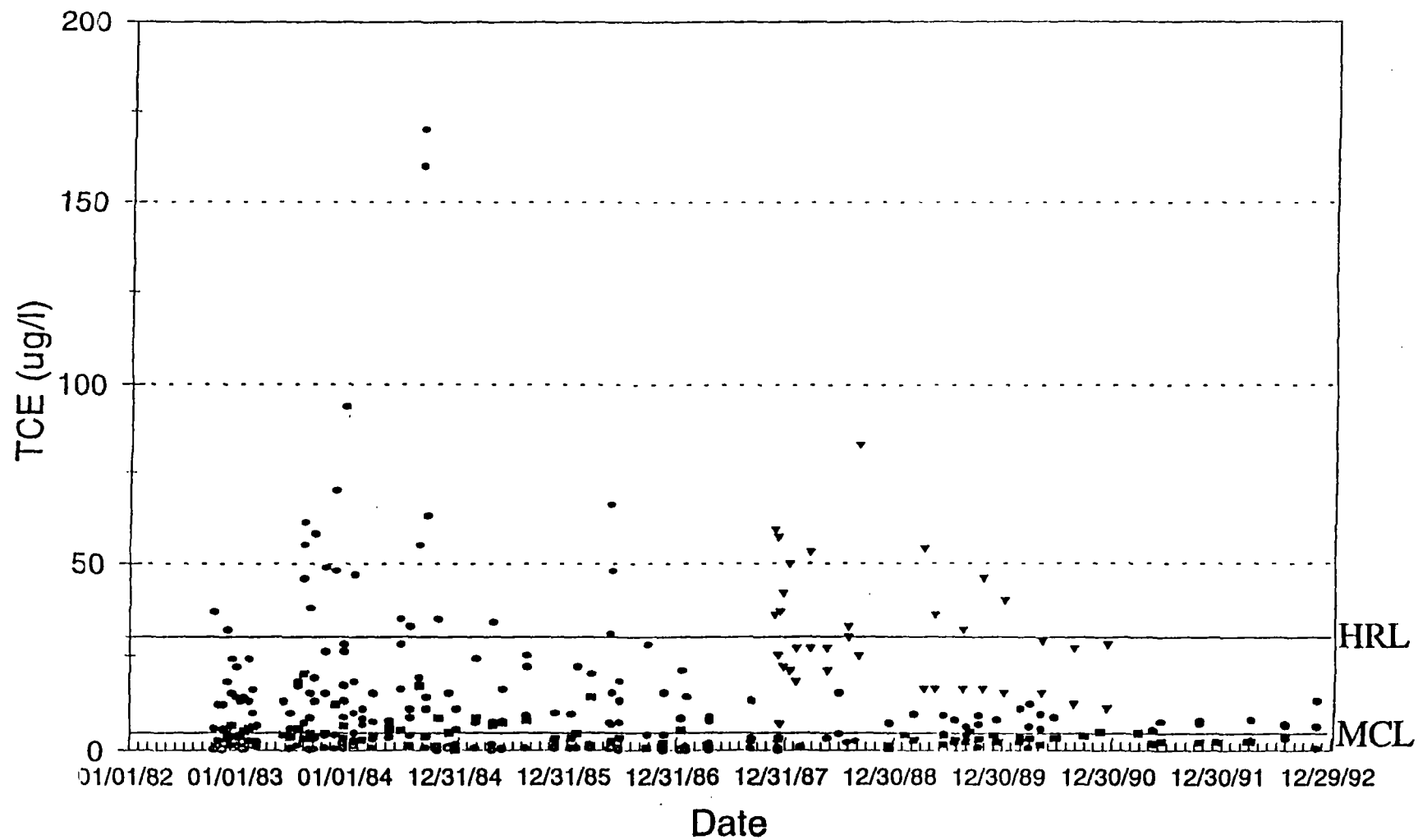
Figure 2

PROPERTY MAP

The Nutting Company
Faribault, Minnesota

Figure 3

TCE Concentration v. Time



- | | | | |
|----------|----------------|----------|----------|
| • City 1 | • City 2 | • City 3 | • City 4 |
| • City 5 | ▪ Distribution | ▼ PW-17 | ▼ PW-18 |